### Twin Beam Power Tube

#### GENERAL DATA

Electrical:		
Heater, for Unipotential Cathode: Heater Arrangement Series	Parallel	
Heater Arrangement Series Voltage (AC or DC) 12.6 ± 10%	6.3 ± 10%	volts
Current 1.125	2.250	amp
Transconductance (Each unit)		
for dc plate volts = 250, dc grid No.2 volts = 175, and dc		
plate ma. = 60	8500	µmhos
Mu-Factor, Grid No.2 to Grid	0300	μ
No.1 (Each unit) for dc plate		
volts & dc grid No. 2 volts =		
225, and dc plate ma. = 60	9	
Direct Interelectrode Capaci- tances (Each unit):		
Grid-No.1 to plate <sup>a</sup>	0.12 max.	pf
Grid No.1 to cathode & grid	0.12	ρ.
No.3, grid No.2, and heater	14.5	pf
Plate to cathode & grid No.3,		
grid No. 2, and heater	7.0	pf
Grid-No.2-to-Cathode Capaci- tance including internal		
grid—No.2 bypass capacitor		
(Approx.)	65	ρf
Markadaala		
Mechanical:		
Operating Position	, base up or	down;
Overall Length	4-1/8" +	3/16"
Seated Length	3-11/16" ±	3/16"
Maximum Diameter		2-3/8"
Bulb		. T16
Bulb Terminals See D		
Base Medium Molded-Flare Septar 7- Basing Designation for BOTTOM VIEW		
• •		. / 01
Pin 1- Heater Puz 4 Pul Pin	6-Grid No.	1 of
Pin 2-Grid No.1 of	Unit No	. 1
Unit No. 2 9 1 1 1 P Pin	7 - Heater	
Pin 3 - Grid No. 2	U <sub>I</sub> - Plate of Unit No	1
	Plate of	
Pin 5 – Heater	<sup>2</sup> Unit No	. 2
Center-Tap (1) (7)		

#### AF POWER AMPLIFIER & MODULATOR - Class AB | b

Values are on a per-tube basis



Maximum CCSc Ratings, Absolute-Maximum Values:

					=
DC CDID No 2 VOLTAGE		225		٠.	
DC GRID-No.2 VOLTAGE			max.	volts	
MAXSIGNAL DC PLATE CURRENT			max.	ma	
MAXSIGNAL PLATE INPUT			max.	watts	
MAXSIGNAL GRID-No.2 INPUT			max.	watts	
PLATE DISSIPATION		30	max.	watts	
PEAK HEATER-CATHODE VOLTAGE:					
Heater negative with respect		100			
to cathode		100	max.	volts	
Heater positive with respect		100			
to cathode		100	max.	volts	
BULB TEMPERATURE (At hottest po					
bulb surface)		235	max.	oC	
Tunion! Connetion:					
Typical Operation:					
DC Plate Voltage DC Grid-No.2 Voltage DC Grid-No.1 Voltage		600		volts	
DC Grid-No.2 Voltage <sup>e</sup>		200		volts	
DC Grid-No.1 Voltage*		-18		volts	
Peak AF Grid-No.1-to-Grid-No.1	Voltage	36		volts	
Zero-Signal DC Plate Current		40		ma	
MaxSignal DC Plate Current		110		ma	
Zero-Signal DC Grid-No.2 Curren MaxSignal DC Grid-No.2 Curren	t	6		ma	
MaxSignal DC Grid-No.2 Curren	t	26		ma	
Effective Load Resistance (Plat	e-to-				
plate)		13750		ohms	
MaxSignal Driving Power (Appr	ox.)	0		watts	
MaxSignal Power Output (Appro		44		watts	
PLATE-MODULATED PUSH-PULL RF POW	R AMPLIFIER	RClas	s C Te l	ephony	
→ PLATE-MODULATED PUSH-PULL RF POWN  Carrier conditions pertube 3					
	for use with	h a maxi	mum mo	d-	
Carrier conditions per tube ;	for use with are on a p	h a maxi	mum mo	d-	
Carrier conditions pertube ; ulation factor of 1. Value: Natural	for use with are on a p Cooling	h a maxi	mum mo	d-	
Carrier conditions pertube ; ulation factor of 1. Value:	for use with are on a p Cooling	h a maxi	mum mo	d-	
Carrier conditions pertube ; ulation factor of 1. Value: Natural	for use with are on a p Cooling	hamaxi bertub	mum mo	d-	
Carrier conditions pertube ; ulation factor of 1. Value: Natural Maximum Ratings, Absolute-Maximu	for use with are on a p Cooling um Values: CCS	h a maxi ber tub IC.	mum mo e basi AS	d- s.	
Carrier conditions pertube; ulation factor of 1. Value: Natural Maximum Ratings, Absolute-Maximum	for use with a are on a page of the constant o	h a maxi ber tub IC. 600	mum mo e basi AS <sup>9</sup> max.	d- s. volts	
Carrier conditions pertube; ulation factor of 1. Value: Natural Maximum Ratings, Absolute-Maximum DC PLATE VOLTAGE	for use with a record a part of the cooling of the	h a maxi ber tub IC. 600 225	mum mo e basi AS <sup>9</sup> max. max.	volts	
Carrier conditions pertube; ulation factor of 1. Value:  Natural  Maximum Ratings, Absolute-Maximum  DC PLATE VOLTAGE	for use with a re on a page of the cooling of the c	IC. 600 225 -175	mum mo e basi  AS <sup>9</sup> max. max. max.	d-s. volts volts volts volts	
Carrier conditions pertube; ulation factor of 1. Value:  Natural  Maximum Ratings, Absolute-Maximu  DC PLATE VOLTAGE	for use with a are on a factoring um Values:  CCS 600 max. 225 max175 max. 212 max.	IC. 600 225 -175 212	mum mo e basi  AS 9 max. max. max. max.	volts volts volts volts	
Carrier conditions pertube; ulation factor of 1. Value:  Natural  Maximum Ratings, Absolute-Maximu  DC PLATE VOLTAGE	for use with a are on a factoring and Values:  CCS  600 max. 225 max.  -175 max. 212 max. 15 max.	IC. 600 225 -175 212	mum mo e basi AS <sup>9</sup> max. max. max. max.	d- s. volts volts volts ma ma	
Carrier conditions pertube; ulation factor of 1. Value:  Natural  Maximum Ratings, Absolute-Maximum  DC PLATE VOLTAGE	For use with are on a p Cooling um Values: CCS 600 max. 225 max. -175 max. 212 max. 15 max. 67.5 max.	IC. 600 225 -175 212 15	mum mode basi  AS <sup>9</sup> max. max. max. max.	volts volts volts volts ma ma watts	
Carrier conditions pertube ; ulation factor of 1. Value:  Natural  Maximum Ratings, Absolute-Maximu  DC PLATE VOLTAGE	For use with a are on a grant of the cooling and a grant of the cooling are cooling as a cooling are cooling as a cooling are cooling as a cooling are	IC. 600 225 -175 212 15 90 7	mum mode basi  AS 9 max. max. max. max. max. max.	volts volts volts volts ma ma watts watts	
Carrier conditions pertube; ulation factor of 1. Value:  Natural  Maximum Ratings, Absolute-Maximum  DC PLATE VOLTAGE	For use with are on a p Cooling um Values: CCS 600 max. 225 max. -175 max. 212 max. 15 max. 67.5 max.	IC. 600 225 -175 212 15 90 7	mum mode basi  AS <sup>9</sup> max. max. max. max.	volts volts volts volts ma ma watts	
Carrier conditions pertube; ulation factor of 1. Value:  Natural  Maximum Ratings, Absolute-Maximum  DC PLATE VOLTAGE  DC GRID-No.2 VOLTAGE  DC GRID-No.1 VOLTAGE  DC PLATE CURRENT  DC GRID-No.1 CURRENT  PLATE INPUT.  GRID-No.2 INPUT.  PLATE DISSIPATION.  PEAK HEATER-CATHODE VOLTAGE:	For use with a are on a grant of the cooling and a grant of the cooling are cooling as a cooling are cooling as a cooling are cooling as a cooling are	IC. 600 225 -175 212 15 90 7	mum mode basi  AS 9 max. max. max. max. max. max.	volts volts volts volts ma ma watts watts	
Carrier conditions pertube; ulation factor of 1. Value:  Natural  Maximum Ratings, Absolute-Maximum  DC PLATE VOLTAGE	For use with a are on a grant of the cooling and Values:  CCS 600 max. 225 max175 max. 212 max. 15 max. 7 max. 21 max.	IC. 600 225 -175 212 15 90 7	mum mo e basi  AS9 max. max. max. max. max. max. max. max.	volts volts volts volts ma watts watts	
Carrier conditions pertube; ulation factor of 1. Value:  Natural  Maximum Ratings, Absolute-Maximum  DC PLATE VOLTAGE	For use with a are on a grant of the cooling and a grant of the cooling are cooling as a cooling are cooling as a cooling are cooling as a cooling are	IC. 600 225 -175 212 15 90 7	mum mode basi  AS 9 max. max. max. max. max. max.	volts volts volts volts ma ma watts watts	
Carrier conditions pertube; ulation factor of 1. Value:  Natural  Maximum Ratings, Absolute-Maximum  DC PLATE VOLTAGE	For use with a are on a grant values:  CCS 600 max. 225 max175 max. 212 max. 15 max. 7 max. 21 max.	IC. 600 225 -175 212 15 90 7 28	mum made basi  AS9  max. max. max. max. max. max. max.	volts volts volts volts ma ma watts watts	
Carrier conditions pertube; ulation factor of 1. Value:  Natural  Maximum Ratings, Absolute-Maximum  DC PLATE VOLTAGE	For use with a are on a grant of the cooling and Values:  CCS 600 max. 225 max175 max. 212 max. 15 max. 7 max. 21 max.	IC. 600 225 -175 212 15 90 7 28	mum mo e basi  AS9 max. max. max. max. max. max. max. max.	volts volts volts volts ma watts watts	
Carrier conditions pertube; ulation factor of 1. Value:  Natural  Maximum Ratings, Absolute-Maximum  DC PLATE VOLTAGE	For use with a are on a grant of the same on a grant of the same o	IC. 600 225 -175 212 15 90 7 28	mum more basi  AS9 max. max. max. max. max. max. max. max.	volts volts volts ma ma watts watts volts	
Carrier conditions pertube; ulation factor of 1. Value:  Natural  Maximum Ratings, Absolute-Maximum  DC PLATE VOLTAGE	For use with a are on a grant values:  CCS 600 max. 225 max175 max. 212 max. 15 max. 7 max. 21 max.	IC. 600 225 -175 212 15 90 7 28	mum made basi  AS9  max. max. max. max. max. max. max.	volts volts volts volts ma ma watts watts	
Carrier conditions pertube ; ulation factor of 1. Value:  Natural  Maximum Ratings, Absolute-Maximu  DC PLATE VOLTAGE	For use with a are on a grant of the same on a grant of the same o	IC. 600 225 -175 212 15 90 7 28	mum more basi  AS9 max. max. max. max. max. max. max. max.	volts volts volts ma ma watts watts volts	
Carrier conditions pertube; ulation factor of 1. Value:  Natural  Maximum Ratings, Absolute-Maximum  DC PLATE VOLTAGE	For use with a are on a grant values:  CCS 600 max. 225 max175 max. 212 max. 15 max. 67.5 max. 21 max. 100 max. 235 max.	IC. 600 225 -175 212 15 90 7 28 100 235	mum mae basi  AS 9 max. max. max. max. max. max. max. max.	volts volts volts volts ma matts watts watts volts	
Carrier conditions pertube ; ulation factor of 1. Value:  Natural  Maximum Ratings, Absolute-Maximu  DC PLATE VOLTAGE	For use with a are on a grant of the same on a grant of the same o	IC. 600 225 -175 212 15 90 7 28	mum mae basi  AS 9 max. max. max. max. max. max. max. max.	volts volts volts ma ma watts watts volts	
Carrier conditions pertube; ulation factor of 1. Value:  Natural  Maximum Ratings, Absolute-Maximum  DC PLATE VOLTAGE	For use with a are on a grant values:  CCS 600 max. 225 max175 max. 212 max. 15 max. 67.5 max. 21 max. 100 max. 235 max.	IC. 600 225 -175 212 15 90 7 28 100 100 235	mum mo e basi  ASS  max. max. max. max. max. max. max. max	volts volts volts volts ma matts watts watts volts	



Color   Colo	CCS	ICAS	
From a grid—No.2 series resistor of:		TORD	
1000 ohms.	From a grid-No.2 series resistor of:		
25000 ohms	32000 ohms 190		
DC Grid-No.1 Voltage: J From a grid-No.1 resistor of:			
From a grid-No.1 resistor of:		- 200	VOILS
15000 ohms			
## 8600 ohms			
Peak RF Grid—No.1-to-Grid—No.1  Voltage			
Voltage	8600 ohms	00	VOILS
DC Plate Current		160 144	volts
DC Grid-No.1 Current (Approx.)	DC Plate Current		
Driving Power (Approx.)	Do di la libiz ballicitti i i i i i i		
Power Output (Approx.) 50 63 70 watts  Forced-Air Cooling  Maximum Ratings, Absolute-Maximum Values:  CCS ICAS  DC PLATE VOLTAGE 600 max. 600 max. volts DC GRID-No.2 VOLTAGE	DC GITG-NO.1 Cultent (Approx./		
Maximum Ratings, Absolute-Maximum Values:   CCS	Diffing fonce (hipping)		
Maximum Ratings, Absolute-Maximum Values:   CCS		-	
DC PLATE VOLTAGE	-		
DC PLATE VOLTAGE	_	ICAS	
DC GRID-No.2 VOLTAGE			volts
DC GRID—No.1 VOLTAGE175 max.	DC TEATE TOETAGE		
DC GRID—No.1 CURRENT. 15 max. 20 max. ma PLATE INPUT . 90 max. 120 max. watts GRID—No.2 INPUT . 7 max. 8 max. watts PLATE DISSIPATION . 28 max. 40 max. watts PEAK HEATER—CATHODE VOLTAGE: Heater negative with     respect to cathode. 100 max. 100 max. volts Heater positive with     respect to cathode. 100 max. 100 max. volts BULB TEMPERATURE (At hottest point on bulb surface) . 235 max. 235 max. 9C  Typical Operation with Forced—Air Cooling: DC Plate Voltage . 425 600 600 volts DC Grid—No.2 Voltage: h From a grid—No.2 series resistor of:     11000 ohms. 200 — volts     25000 ohms. — 200 — volts     20000 ohms. — 200 — volts     25000 ohms. — 200 — volts	DO dillo liota formati		volts
PLATE INPUT	BO TEMPE SOMETIME		
RRID-No.2 INPUT	DC divid word contract to the		
PLATE DISSIPATION 28 max. 40 max. watts  PEAK HEATER-CATHODE VOLTAGE: Heater negative with respect to cathode 100 max. 100 max. volts Heater positive with respect to cathode 100 max. 100 max. volts  BULB TEMPERATURE (At hottest point on bulb surface) 235 max. 235 max. 0C  Typical Operation with Forced-Air Cooling:  DC Plate Voltage	I LATE THE OF THE PERSON OF TH		
Heater negative with respect to cathode 100 max. 100 max. volts Heater positive with respect to cathode 100 max. 100 max. volts BULB TEMPERATURE (At hottest point on bulb surface) 235 max. 235 max. OC  Typical Operation with Forced-Air Cooling: DC Plate Voltage 425 600 600 volts DC Grid-No.2 Voltage: h From a grid-No.2 series resistor of: 11000 ohms 200 volts 20000 ohms 200 - volts 20000 ohms 200 - volts CC Grid-No.1 Voltage: j From a grid-No.1 resistor of: 4300 ohms 60 volts 8600 ohms 60 volts 5400 ohms 70 volts Peak RF Grid-No.1-to-Grid-			watts
respect to cathode 100 max. 100 max. volts Heater positive with respect to cathode 100 max. 100 max. volts  BULB TEMPERATURE (At hottest point on bulb surface) 235 max. 235 max. 0C  Typical Operation with Forced-Air Cooling:  DC Plate Voltage 425 600 600 volts  DC Grid-No.2 Voltage: h From a grid-No.2 series resistor of:     11000 ohms 200 volts     25000 ohms 200 volts     25000 ohms 200 volts  DC Grid-No.1 Voltage: J From a grid-No.1 resistor of:     4300 ohms60			
Heater positive with respect to cathode 100 max. 100 max. volts BULB TEMPERATURE (At hottest point on bulb surface) 235 max. 235 max. oc  Typical Operation with Forced-Air Cooling:  DC Plate Voltage 425 600 600 volts  DC Grid-No.2 Voltage: h From a grid-No.2 series resistor of:     11000 ohms 200 volts     25000 ohms 200 - volts     20000 ohms 200 volts  DC Grid-No.1 Voltage: J From a grid-No.1 resistor of:     4300 ohms60 - volts     8600 ohms60 - volts     5400 ohms70 volts Peak RF Grid-No.1-to-Grid-		100 may	volts
respect to cathode 100 max.	Toopede to cathoder t	100 max.	40163
BULB TEMPERATURE (At hottest point on bulb surface)		100 max.	volts
Typical Operation with Forced-Air Cooling:  DC Plate Voltage		225	0c
DC Plate Voltage:	F9 (	250 max.	C
DC Grid-No.2 Voltage: h  From a grid-No.2 series resistor of:  11000 ohms 200 volts 25000 ohms 200 - volts 20000 ohms 200 volts  DC Grid-No.1 Voltage: J  From a grid-No.1 resistor of:  4300 ohms60 volts 8600 ohms60 volts 5400 ohms 70 volts Peak RF Grid-No.1-to-Grid-			1.
From a grid-No. 2 series resistor of:  11000 ohms 200 volts 25000 ohms 200 - volts 20000 ohms 200 volts  DC Grid-No.1 Voltage: J From a grid-No.1 resistor of: 4300 ohms60 - volts 8600 ohms60 - volts 5400 ohms 70 volts Peak RF Grid-No.1-to-Grid-	bo , rate to reagon to	600	voits.
sistor of:     11000 ohms 200 volts     25000 ohms 200 - volts     20000 ohms 200 volts  CC Grid-No.1 Voltage: From a grid-No.1 resistor     of:     4300 ohms60 - volts     8600 ohms60 - volts     5400 ohms70 volts  Peak RF Grid-No.1-to-Grid-			
25000 ohms 200 - volts 20000 ohms 200 volts  DC Grid-No.1 Voltage:  From a grid-No.1 resistor of: 4300 ohms60 volts 8600 ohms60 - volts 5400 ohms 70 volts Peak RF Grid-No.1-to-Grid-			
20000 ohms 200 volts  DC Grid-No.1 Voltage: J From a grid-No.1 resistor of:	11000 0	-	
DC Grid-No.1 Voltage: J From a grid-No.1 resistor of:     4300 ohms60 volts     8600 ohms60 - volts     5400 ohms70 volts Peak RF Grid-No.1-to-Grid-		200	
From a grid-No.1 resistor of:     4300 ohms60 volts     8600 ohms60 - volts     5400 ohms70 volts Peak RF Grid-No.1-to-Grid-		200	VOI 13
of: 4300 ohms60 volts 8600 ohms60 - volts 5400 ohms70 volts Peak RF Grid-No.1-to-Grid-			
8600 ohms60 - volts 5400 ohms70 volts Peak RF Grid-No.1-to-Grid-	of:		
5400 ohms70 volts Peak RF Grid-No.1-to-Grid-	1,000 0	_	
Peak RF Grid-No.1-to-Grid-	Cood offine to the terminal te	<del>-</del> 70	
No.1 Voltage 160 144 180 volts	Peak RF Grid-No.1-to-Grid-	0	
	No.1 Voltage 160 144	180	volts

	CC	S	ICAS	
DC Plate Current	212	150	200	та
DC Grid-No.2 Current	21	16	20	ma
DC Grid-No.1 Current (Approx.)	14	7	13	ma
Driving Power (Approx.)	1	0.5	1.1	watts
Power Output (Approx.)	63	70	90	watts
PUSH-PULL RF POWER AMPLIFIER & OSCILLA and				

#### PUSH-PULL RF POWER AMPLIFIER - Class C FM Telephony

Values are on a per-tube basis unless otherwise specified

#### Natural Cooling

Maximum Ratings. Absolute-Maximum Values:

maximum katings, Ausolule-Ruxim	um values.		
	CCS	ICAS	
DC PLATE VOLTAGE  DC GRID-No.2 VOLTAGE  DC GRID-No.1 VOLTAGE  DC PLATE CURRENT  DC GRID-No.1 CURRENT  PLATE INPUT  GRID-No.2 INPUT  PLATE DISSIPATION  PEAK HEATER-CATHODE VOLTAGE:  Heater negative with	750 max. 225 max. -175 max. 240 max. 15 max. 90 max. 7 max. 30 max.	750 max. 225 max. -175 max. 240 max. 15 max. 120 max. 7 max. 40 max.	volts volts volts ma ma watts watts
respect to cathode  Heater positive with	100 max.	100 max.	volts
respect to cathode BULB TEMPERATURE (At hottest	100 max.	100 max.	volts
point on bulb surface)	265 max.	265 max.	°C
Typical Operation with Natural DC Plate Voltage DC Grid-No.2 Voltage:  From a grid-No.2 series resistor of:	Cooling: 750	500 750	volts
40000 ohms	190 	200 – – 200	volts volts volts
From a grid-No.1 resistor of:			
12500 ohms	50 	-45 - -50	volts volts volts
360 chms	–50 – –	-45 - -50	volts volts volts
No.1 Voltage	116 120 14 4	128 124 230 160 23 17 15 7	volts ma ma ma

Driving Power (Approx.) Power Output (Approx.)	0.3	0.9 0.4 83 90	watt watts
Forced-Air Co	oling		
Maximum Ratings, Absolute-Maximum	Values:		
	CCS	ICAS	
DC GRID-No.2 VOLTAGE	750 max. 225 max. 175 max. 240 max. 15 max. 120 max. 7 max. 40 max.	750 max. 250 max. -175 max. 240 max. 20 max. 150 max. 8 max. 45 max.	volts volts volts ma ma watts watts watts
Heater positive with	100 max.	100 max.	volts
	235 max.	235 max.	°C
Typical Operation with Forced-Air DC Plate Voltage DC Grid-No.2 Voltage: " From a grid-No.2 series resistor of: 13000 ohms 32000 ohms	Cooling: 500 750 200 - - 200	750 	volts volts volts
27500 ohms DC Grid-No.1 Voltage: P From a grid-No.1 resistor of: 3000 ohms 7200 ohms 4200 ohms From a cathode resistor of:	-45 - -50 -	200 - - -50	volts volts volts
170 ohms	-45 - 50 	- -50	volts volts volts
No.1 Voltage	128 124 230 160 23 - 17 15 - 7 0.9 0.4 83 90	134 200 20 12 0.8 115	volts ma ma ma watt watts

A With external shield up to flange seal.

Obtained preferably from a separate source or from the plate-voltage supply with a voltage divider.



b Subscript 1 indicates that grid-No.1 current does not flow during any part of the input cycle.

Continuous Commercial Service.

d Averaged over any audio-frequency cycle of sine-wave form.

## 829B

- f The type of input-coupling network used should not introduce too much resistance in the grid-No.1 circuit. Transformer or impedance coupling devices are recommended. When grid No.1 is operated in the negative region with fixed bias, the dc grid-No.1-circuit resistance should not exceed 100000 ohms. Cathode bias is not recommended.
- g Intermittent Commercial and Amateur Service.
- h Obtained preferably from a separate source modulated with the plate supply, or from the modulated plate supply through a series resistor.
- j Obtained from grid-No.1 resistor or from a combination of grid-No.1 resistor with either fixed supply or cathode resistor.
- k in ICAS applications at frequencies less than 20 Mc where duty factor does not exceed 0.2, maximum "on" period does not exceed 30 seconds, and average modulation factor does not exceed 0.25, maximum grid-No.2 input of 12 watts is permitted,
- Key-down conditions per tube without amplitude modulation. Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115 per cent of the carrier conditions.
- Obtained preferably from a separate source, or from the plate supply voltage with avoltage divider, or through a series resistor. A series grid-No.2 resistor should be used only when the \$298 is used in a circuit which is not keyed. Grid-No.2 voltage must not exceed 600 volts under key-up conditions.
- Obtained from fixed supply, by grid No.1 resistor, by cathode resistor, or by combination methods,

#### SHIELDING AND BYPASSING

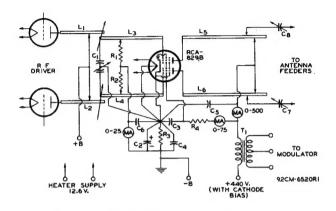
Shielding of the 829B in an rf amplifier is required for stable operation. A convenient method of shielding is to mount the tube with one end through a hole in a metal plate so that the edge of the hole is close to the internal shield of the tube. Due to the importance, at the very-high frequencies, of obtaining the shortest leads possible, rf bypassing must be accomplished close to the tube terminals. Ribbon leads acting as plates of the bypass capacitors are effective. All circuit returns should be made to the common cathode connection. RF chokes may be advisable in the voltage-supply leads.

#### MAXIMUM RATINGS VS OPERATING FREQUENCY

OPERATING	MAXIMUM PERMISS OF MAXIMUM-RATED PLATE	IBLE PERCENTAGE Voltage & Plate INPUT	
FREQUENCY	TELEPHONY	TELEGRAPHY	
Мс	Class C Plate-Modulated	Class C Unmodulated	
200 100 250 89		100 89	

## VHF PLATE-MODULATED PUSH-PULL RF POWER AMPLIFIER

(OPERATING FREQUENCY APPROX. 200 Mc)

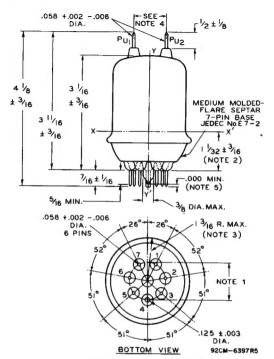


 $L_1$   $L_2$  = Dimensions dependent on C, = 1.2 to 10 pf per section type of driver tube;  $C_2 = 25 \mu f$ , 200 Volts Approx. same as Ls Ls C2 C2 C5 C5 = 500 pf, Mica  $L_3$   $L_4 = 1/4$ " Dia. coppertubing,  $C_7 C_8 = 3 \text{ to } 35 \text{ pf}$ approx. 10" long and R, R, = 7500 to 15000 Ohms, I Watt spaced approx. 7/8" between centers. Ra = 60 Ohms, 10 Watts  $L_5$   $L_6$  = 3/8" Dia. copper tubing, R. = 6400 Ohms, 15 Watts approx. 7" long and T, = Modulation Transformer spaced approx. 7/8" between centers.

**NOTE 1:** Adjust coupling of  $L_1L_2$  and  $L_2L_4$  for optimum grid excitation.

NOTE 2: Grid resistors should be adjusted on  $L_3L_4$  at voltage node.

Information furnished by RCA is believed to be accurate and reliable. However, no responsibility is assumed by RCA for its use; nor for any infringements of patents or other rights of third parties which may result from its use. No licespae is granted by implication or otherwise under any patent or patent rights of RCA.



ALL DIMENSIONS IN INCHES

THE REFERENCE AXIS YY' IS DEFINED AS THE AXIS OF THE BASE-PIN GAUGE DESCRIBED IN NOTE 1.

NOTE I: ANGULAR VARIATIONS BETWEEN PINS AND VARIATION IN PIN-CIRCLE DIAMETER ARE HELD TO TOLERANCES SUCH THAT PINS WILL ENTER TO A DISTANCE OF 0.375" A FLAT-PLATE BASE-PIN GAUGE HAVING SIX HOLES 0.0800" ± 0.005" AND ONE HOLE 0.1450" ± 0.0005" ARRANGED ON A 1.0000" ± 0.0005" CIRCLE AT SPECIFIED ANGLES WITH TOLERANCE OF ±5' FOR EACH ANGLE. GAUGE IS ALSO PROVIDED WITH A HOLE 0.500" ± 0.010" CONCENTRIC WITH PIN CIRCLE WHOSE CENTER IS ON THE AXIS YY!

NOTE 2: A FLAT-PLATE FLANGE GAUGE WITH HOLE 2.063" + 0.003" -0.000" IS LOWERED OVER TUBE SEATED IN BASE-PIN GAUGE SO THAT THE HOLE AXIS IS COINCIDENT WITH AXIS YY WITHIN 0.150", AND SO THAT THE BOTTOM SURFACE OF THE FLANGE GAUGE IS PARALLEL TO THE TOP SURFACE OF THE BASE-PIN GAUGE, AND UNTIL THE FLANGE GAUGE RESTS ON THE TUBE-FLANGE SEAL AT POSITION XX'. THE PERPENDICULAR DISTANCE BETWEEN THE TWO

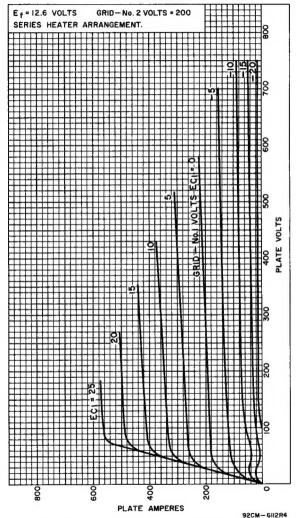
GAUGES WILL BE AS SHOWN.

NOTE 3: MINIMUM DIAMETER OF TUBE-SEAL FLANGE WILL BE SUCH THAT A RING GAUGE HAVING INSIDE DIAMETER OF 2, 125" - 0,000" + 0.003" AND THICKNESS OF 0.125" ± 0.010" WILL NOT PASS THE FLANGE WHEN TRIED AT ANY ANGLE.

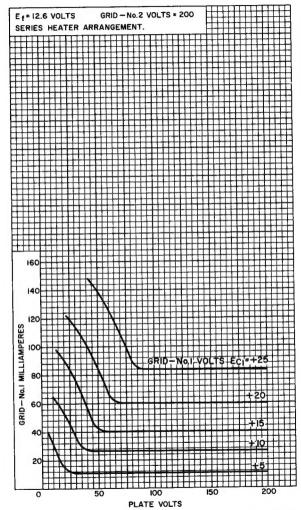
NOTE 4: THE PLATE LEADS WILL ENTER A FLAT-PLATE PLATE-LEAD GAUGE HAVING MINIMUM THICKNESS OF 0.375" AND HAVING TWO HOLES 0.1200" ± 0.0005" WHOSE CENTERS ARE LOCATED AT A DISTANCE OF 0.424" ± 0.001" FROM THE AXIS YY! AND WHOSE AXES ARE PARALLEL TO YY'. THE PLANE THROUGH THESE AXES WILL BE 900 ± 5' FROM THE PLANE THROUGH YY' AND PIN No.4.

NOTE 5: EXHAUST TIPWILL NOT EXTEND BEYOND THE PLANE WHICH PASSES THROUGH THE ENDS OF THE THREE LONGEST PINS.

# TYPICAL CHARACTERISTICS For Each Unit



# TYPICAL CHARACTERISTICS For Each Unit



## TYPICAL CHARACTERISTICS For Each Unit

